CLAIMS

Cancel claims 1-4.

5. (New) A method of forming a metal article, comprising:

subjecting a metallic material to upset forging to form the metallic article, the upset forging being conducted at a temperature below a minimum temperature of static recrystallization of the composition of the billet, the upset forging comprising utilization of a lubricant to entirely separate the billet from a forging tool during the forging.

6. (New) The method of claim 5 wherein the lubricant is selected from the group consisting of polytetrafluoroethylene and polyurethane.

7. (New) The method of claim 5 further comprising forming the metal article into a sputtering target.

8. (New) The method of claim 7 wherein the forming the metal article into a sputtering target occurs during the upset forging.

9. (New) The method of claim 7 wherein the forming the metal article into a sputtering target comprises further processing of the metal article after the upset forging.

10. (New) The method of claim 9 wherein the additional processing comprises recrystallization annealing.

11. (New) The method of claim 5 wherein the metal article comprises one or more of Al, Ti, Ta, Cu, Nb, Ni, Mo, Au, Ag, Re, and Pt.

12. (New) The method of claim 5 wherein the metal article comprises Al.

13. (New) The method of claim 5 wherein the metal article comprises Ti.

14. (New) The method of claim 5 wherein the metal article comprises Ta.

15. (New) The method of claim 5 wherein the metal article comprises Cu

16. (New) The method of claim 5 wherein the metal article comprises Nb.

17. (New) The method of claim 5 wherein the metal article comprises Ni.

18. (New) The method of claim 5 wherein the metal article comprises Mo.

19. (New) The method of claim 5 wherein the metal article comprises Au.

20. (New) The method of claim 5 wherein the metal article comprises Ag.

21. (New) The method of claim 5 wherein the metal article comprises Re.

22. (New) The method of claim 5 wherein the metal article comprises Pt.

23. (New) A method of forming a metal article comprising at least 99.95 wt.% tantalum and having a surface, comprising:

forming a billet comprising a composition with includes 99.95 wt.% tantalum utilizing upset forging, the upset forging being conducted at a temperature below a minimum temperature of static recrystallization of the composition of the billet, the upset forging comprising utilization of a lubricant to entirely separate the billet from a forging tool during the forging; and

after the upset forging, the billet being a metal article comprising 99.95 wt.% tantalum and having a surface; the surface having a substantially uniform {100} crystallographic texture and an average grain size of less than 50 microns.

24. (New) The method of claim 23 wherein the lubricant is selected from the group consisting of polytetrafluoroethylene and polyurethane.

25. (New) The method of claim 23 further comprising forming the metal article into a sputtering target.

26. (New) The method of claim 25 wherein the forming the metal article into a sputtering target occurs during the upset forging.

27. (New) The method of claim 25 wherein the forming the metal article into a sputtering target comprises further processing of the metal article after the upset forging.

28. (New) The method of claim 27 wherein the additional processing comprises recrystallization annealing.

29. (New) The method of claim 23 wherein the metal article surface comprises a maximum grain size of less than 50 microns.

30. (New) The method of claim 23 wherein the metal article comprises a thickness, and an average grain size throughout the thickness of less than 50 microns.

31. (New) The method of claim 23 wherein the metal article comprises a thickness, and an average grain size throughout the thickness of about 25 microns.